CLAIMS

1. A drive shaft assembly for automotive applications for transmitting a rotary drive, the drive shaft assembly comprising:

a central flexible rotatable core shaft having an outer cylindrical surface;

an outer sleeve surrounding the central flexible core shaft and spaced from the core shaft; and

at least one elastomeric damper located within the outer sleeve and positioned at a location along the length of the drive shaft assembly, the damper extending to and lightly abutting against the outer cylindrical surface of the core shaft.

2. A drive shaft assembly as claimed in claim 1 in which the damper comprises an elastomeric washer with an inner bore defined in the centre, the inner bore corresponding to the outer cylindrical surface of the core shaft.

3. A drive shaft assembly as claimed in claim 2 in which the damper has a cross sectional profile which radially tapers to an apex at the defined inner bore of the washer.

4. A drive shaft assembly as claimed in any preceding claim in which the damper comprises a urethane damper.

5. A drive shaft assembly as claimed in any one of claims 1 to 3 in which the damper comprises a rubber damper.

6. A drive shaft assembly as claimed in any preceding claim comprising part of a vehicle seat adjustment assembly for transmitting rotary drive from a motor to the vehicle seat adjustment assembly.

7. A drive shaft assembly as claimed in any preceding claim in which, in use, the core shaft rotates within an operating speed range with the core shaft, when rotating in isolation, having a calculated natural resonant frequency and/or resonant harmonic frequency within the operating range; the core shaft having at least one point along the length of the core shaft of maximum amplitude resonant displacement at said calculated natural resonant frequency and/or resonant harmonic frequency; the at least one damper is positioned at a location along the length of the core shaft generally corresponding to the at least one point of maximum amplitude resonant displacement of the core shaft.

8. A drive shaft assembly as claimed in any preceding claim in which the damper is positioned halfway along the length of the core shaft.

9. A drive shaft assembly as claimed in any preceding claim in which, in use, the core shaft rotates within an operating speed range with the core shaft, the at least one damper is positioned at a location along the length of the core shaft generally corresponding to a nodal stationary point of an altered natural resonant frequency and/or resonant harmonic frequency amplitude resonant displacement profile of the core shaft such that the thereby altered natural resonant frequency and/or resonant harmonic frequency is substantially outside of the operating range.

10. A drive shaft assembly as claimed in any preceding claim in which the at least one damper is positioned at a position one third of the length along the core shaft.

11. A drive shaft assembly as claimed in claim 10 in which the at least one damper comprises a first and second damper,

the first damper is positioned at a position one third of the length along the core shaft and the second damper is positioned at a position two thirds of the length along the core shaft.

12. A drive shaft assembly as claimed in any preceding claim in which the outer sleeve only extends along part of the length of the core shaft.

13. A drive shaft assembly as claimed in any preceding claim in which the outer sleeve partially surrounds and only partially encloses the core shaft.

14. A drive shaft assembly substantially as hereinbefore described with reference to, and/or as shown in figures 1 to 5b.